

REMARKS

Applicants submit and Excess Claim Fee Payment Letter for one (1) additional independent claim and one (1) additional total claim.

Claims 1-1, 14 and 18-26 are all of the claims pending in the application. Claims 12-13 and 15-17 have been canceled without prejudice or disclaimer. Claims 1-3 and 6-11 have been amended to more particularly define the invention. Claims 18-26 have been added to claim additional features of the invention and to provide more varied protection of the claimed invention.

Applicants respectfully acknowledge the Examiner's indication that claims 3-4, 10-11 and 13 would be allowable if rewritten in independent form. Accordingly, Applicants have rewritten claim 10 into independent form as new claim 25. Applicants submit, however, that all of claims 1-11, 14 and 18-26 are allowable over the cited prior art references.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1, 2, 5-9, 12, and 14-17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Nakahara et al. (U.S. Publication No. 2003/0096165) (hereinafter "Nakahara"). Claims 9, 12, 14, 16, and 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Visco et al. (U.S. Patent No. 5,516,598) (hereinafter "Visco").

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention (e.g., defined by claim 9) is directed to a secondary battery. The secondary battery includes a positive electrode, a negative electrode, and an electrolyte disposed between the positive electrode and the negative electrode. The active material of one of the positive electrode and the negative electrode includes a compound having a sulfur radical in a starting state.

It is desired to provide lighter secondary batteries having a higher energy density for use in portable electronic devices. Certain conventional secondary batteries are made with heavyweight lithium transition metal oxides as the active material of the positive electrode. The lithium transition metal oxides do not provide a sufficient energy density. Other conventional secondary batteries provide an organic compound having a sulfur-sulfur bond as the active material for the positive electrode. These secondary batteries provide a high energy density, however, the stability of the battery is insufficient.

The claimed invention of exemplary claim 9, on the other hand, provides a secondary battery including a positive electrode, a negative electrode, and an electrolyte disposed between the positive electrode and the negative electrode. The active material of one of the positive electrode and the negative electrode includes a compound having a sulfur radical in a starting state (see e.g., Application at page 2, line 33 through page 3, line 2). This combination of features provides a highly-stable battery having a high energy density (see Application at page 2, lines 31-32).

II. THE PRIOR ART REFERENCES

A. The Nakahara Reference

The Examiner alleges that Nakahara teaches the claimed invention of claims 1-2, 5-9, 12 and 14-17. Applicants submit, however, that there are elements of the claimed invention which are neither taught nor suggested by Nakahara.

If the Examiner, however, wishes to pursue this rejection Applicants submit that the Nakahara reference can be removed by filing a verified translation to perfect a claim to foreign priority based on Applicants' priority document JP 2000-302669. The U.S. filing date of Nakahara is February 22, 2001, which is after the filing date of JP 2000-302669 (i.e., Applicants' foreign priority document), which was filed on October 2, 2000.

In addition, Nakahara's earliest foreign priority document, JP 2000-368475, was filed on February 25, 2000. JP 2000-368475 was not published more than one year prior to Applicants' U.S. filing date. Therefore, JP 2000-368475 can not be used as a prior art reference against the claimed invention.

Accordingly, the Nakahara reference can be eliminated as a prior art reference because Applicants' priority document provides support under 35 U.S.C. § 112 for each of the rejected claims. A verified English translation of JP 2000-302669 is filed herewith.

Therefore, Applicants submit that Nakahara is not a prior art reference with respect to the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

B. The Visco Reference

The Examiner alleges that Visco teaches the claimed invention of claims 9, 12, 14, and 16-17. Applicants submit, however, that there are elements of the claimed invention which are neither taught nor suggested by Visco.

That is, Visco does not teach or suggest a secondary battery "*wherein active material of one of said positive electrode and said negative electrode comprises a compound having a sulfur radical in a starting state*", as recited by claim 9.

The Examiner attempts to rely on column 1, lines 51 et seq. of Visco to support his allegations. The Examiner, however, is clearly incorrect.

That is, nowhere in this passage (nor anywhere else for that matter) does Visco teach or suggest a secondary battery wherein an active material of one of the positive electrode and the negative electrode includes a compound having a sulfur radical in a starting state. Indeed, the Examiner has not even alleged that Visco teaches this feature.

In fact, Visco merely teaches, a secondary battery comprising an electrode material having a sulfur radical. The radicals are present in a partially oxidized state or a partially reduced state and may be combined with an aromatic R group.

Therefore, Applicants submit that Visco does not teach or suggest the elements of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

III. NEW CLAIMS

New claims 18-26 are added to provide more varied protection for the present

invention and to claim additional features of the invention. These claims are independently patentable because of the novel features recited therein.

Applicants respectfully submit that new claim 18-26 are patentable over any combination of the applied references at least for analogous reasons to those set forth above with respect to claims 1-11 and 14.

IV. FORMAL MATTERS AND CONCLUSION

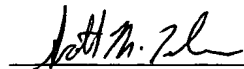
In view of the foregoing, Applicants submit that claims 1-11, 14 and 18-26, all of the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

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